The GOES-R Proving Ground within the Aviation Weather Testbed

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ABSTRACT

In August 2014 the GOES-R Proving Ground at the Aviation Weather Testbed (AWT) examined the application of the Geostationary Lightning Mapper to potentially increase lead times for the issuance and rescission of Convective SIGMETs and this instrument's impact on the real-time weather monitoring provided to traffic flow managers at the FAA's Air Traffic Control Systems Command Center (ATCSCC) responsible to maintaining safe and efficient flow of aircraft across the U.S. National Airspace System. Using real time proxy data from total lightning networks, participants supported the experimental issuance of Collaborative Aviation Weather Statements (CAWS), a product designed to bridge the gap between meteorological information and air traffic flow management decision support, during the AWT Summer Experiment in 2014.

Additionally, various GOES-R algorithms that identify features such as low ceilings, icing, and turbulence have shown the potential to increase the situational awareness in the generation of G-AIRMET products.

The Aviation Weather Testbed at NOAA's Aviation Weather Center has long been known for its extensive reach throughout the aviation community. It is a place in which National Weather Service and AWC forecasters, Federal Aviation Administration employees, commercial airline and general aviation representatives, military personnel, aviation research scientists, and others come together to work towards the improvement of decision support tools for aviation forecasting. This synergy allows a well-rounded environment in which to test evaluate advanced the innovative and advanced data and algorithms used to predict aviation weather hazards.